

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1-8. (cancelled)

9. (new) A method of stimulating the perfusion of ischemic tissues, comprising administering Factor XIII.

10. (new) The method of claim 9, wherein the Factor XIII is administered by topical administration.

11. (new) The method of claim 9, wherein the Factor XIII is activated in vitro or in vivo.

12. (new) The method of claim 11, wherein the Factor XIII is administered by injection.

13. (new) The method of claim 11, wherein the Factor XIII is administered by topical application.

14. (new) A method of stimulating the perfusion of ischemic tissues by the proliferation of new blood vessels, comprising administering Factor XIII.

15. (new) The method of claim 14, wherein the Factor XIII is administered by topical application.

16. (new) The method of claim 14, wherein the Factor XIII is activated in vitro or in vivo.

17. (new) The method of claim 16, wherein the Factor XIII is administered by injection.

18. (new) The method of claim 16, wherein the Factor XIII is administered by topical application.

19. (new) The method of claim 12, wherein the Factor XIII is administered to treat a myocardial infarction.

20. (new) The method of claim 17, wherein the Factor XIII is administered to treat a myocardial infarction.

21. (new) The method of claim 12, wherein the Factor XIII is administered to treat an ischemic stroke or transient ischemic attack.

22. (new) The method of claim 17, wherein the Factor XIII is administered to treat an ischemic stroke or transient ischemic attack.

23. (new) The method of claim 12, wherein the Factor XIII is administered to treat vascular or veno-occlusive diseases or obstructions of the microcirculation.

24. (new) The method of claim 17, wherein the Factor XIII is administered to treat vascular or veno-occlusive diseases or obstructions of the microcirculation.